REMARKS

Claims 1-24 are all the claims pending in the application. By this amendment, Applicant amends claims 1-23 to clarify the invention and for better conformity with the US practice. In addition, Applicant cancels claim 24 and adds claims 25-27. Claims 25-27 are clearly supported throughout the specification *e.g.*, page 21, line 22 to page 22, line 2 of the specification.

I. Preliminary Matters

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for accepting the drawings. The Examiner, however, did not indicate receipt of the certified copy of the priority document filed on February 12, 2002. Applicant respectfully requests the Examiner to confirm that the certified copy of the priority document has been received.

Applicant also thanks the Examiner for initialing the references listed on forms PTO/SB/08 A & B submitted with the Information Disclosure Statements filed on February 12, 2002 and September 17, 2004.

II. Summary of the Office Action

The Examiner rejected claims 1-24. Specifically, claims 17-24 are rejected under 35 U.S.C. § 101, claims 2-4, 7, 10-12, 15, 18-20, and 23 are rejected under 35 U.S.C. § 112, second paragraph, claims 1-4, 9-12, 16-20, and 24 are rejected under 35 U.S.C. § 102(b), and claims 1-24 are rejected under 35 U.S.C. § 102(e).

III. Claim Rejection under 35 U.S.C. § 101

Claims 17-24 are rejected under 35 U.S.C. § 101, as being drawn to non-functional descriptive material. Claim 24 has been canceled. With respect to claims 17-23, Applicant traverses this rejection in view of the following comments.

The Examiner alleges that claims 17-24 do not impart functional relationship to a computing device (*see* page 2 of the Office Action). Applicant has amended claims 17-24 to recite "a computer-readable medium" and "wherein the digital watermark prevents a device from copying said contents or allows the device to copy said contents one time only." Accordingly, Applicant respectfully submits that the claims now impart a functional relationship to the computing device. In view of these self-explanatory claim amendments, Applicant respectfully requests the Examiner to withdraw this rejection of claims 17-23.

IV. Claim Rejection under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 2-4, 7, 10-12, 15, 18-20, and 23 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended the claims to recite the features of the invention more particularly. These amendments coincidentally overcame the Examiner's problems with the claims. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claims 2-4, 7, 10-12, 15, 18-20, and 23.

V. Claim Rejection under 35 U.S.C. § 102

Claims 1-4, 9-12, 16-20, and 24 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,721,788 to Powell et al. (hereinafter "Powell"). Applicant respectfully traverses these grounds of rejection in view of the following comments.

Claim 24 has been canceled. Therefore, this rejection is moot with respect to claim 24.

Of these remaining rejected claims, only claims 1, 3, 9, 11, 17, and 19 are independent. Claims 1 and 9 require in some variation determining a timing before an end timing of said contents and setting an end timing of said embedded digital watermark in said contents at said

determined timing. Claims 3 and 11 require some variation determining a timing before a start timing of current content of said contents and setting a start timing of said embedded digital watermark at said determined timing in previous content of said contents. Claim 17 requires: "an end timing of said embedded digital watermark in said contents is set before an end timing of said contents" and claim 19 recites: "a start timing of said embedded digital watermark for next content of said contents is set in said contents before a start timing of said next content." That is, the independent claims, in various recitations, require setting a timing (start or end) for the watermark.

Powell, on the other hand, only discloses a method and a system for embedding signatures within visual images even after the image has been edited or transformed (col. 1, lines 28 to 53). Powell discloses extrema within 10% of the image size of any side are not used as signature points. This protects against loss of signature points caused by the practice of cropping the border area of an image. It is also preferable that relative extrema that are randomly and widely spaced are used rather than those that appear in regular patterns (col. 4, lines 40 to 45). Powell, however, relates to setting a physical position of the signature points within the image and not to setting timing for the watermark. In short, Powell does not disclose or suggest setting a timing of the digital signal.

Therefore, "setting an end timing of said embedded digital watermark in said contents at said determined timing" set forth in claims 1 and 9, "setting a start timing of said embedded digital watermark at said determined timing, in previous content of said contents" set forth in claims 3 and 11, "an end timing of said embedded digital watermark in said contents is set before an end timing of said contents," set forth in claim 17 and "a start timing of said embedded digital

watermark for next content is set in said contents before a start timing of said next content," set forth in claim 19 is not disclosed by Powell, which lacks setting a timing (as opposed to a physical position) of the signature. For at least these exemplary reasons, claims 1, 3, 9, 11, 17, and 19 patentably distinguish from Powell. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection of claims 1, 3, 9, 11, 17, and 19 and their dependent claims 2, 4, 10, 12, 16, 18, and 20.

Claims 1-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,311,214 to Rhoads (hereinafter "Rhoads"). Applicant respectfully traverses these grounds of rejection in view of the following comments.

Of these rejected claims, claims 1, 3, 5, 9, 11, 13, 17, 19, and 21 are independent. These independent claims require in some variation setting a timing for the watermark.

Rhoads, on the other hand, relates to a printed object, such as an item of postal mail, a book, printed advertising, a business card, which is steganographically encoded with plural-bit data. When such an object is presented to an optical sensor, the plural-bit data is decoded and used to establish a link to an internet address corresponding to that object (*see* Abstract). Specifically, Rhoads discloses embedding auxiliary data (watermark) into music data. In Rhoads, however, watermark payload has the following bits: a six-byte string "A" serving as a digital object identifier, a two-byte field "B" serving as a key into an "artist" field of the remote database, a three-byte field "C" serving as a key into a "title" field of the remote database, a 14-bit field "D" serving as a key into a "label" field of the remote database, an 8-bit integer "E" representing the work's year of first publication; a 10-bit field "F" serving as a key into a "price" field of the remote database, a two-byte usage control string "G", a streaming data channel "H",

and a string of bits "I" serving as a cyclic redundancy checksum for the foregoing. This payload is encoded repeatedly, or redundantly through the music, so that the full payload can be decoded from partial excerpts of the music (col. 43, lines 1 to 26).

Rhoads, however, does not disclose or suggest setting the timing of the watermark. That is, Rhoads only discloses a watermark payload and positioning various bits within the payload. In short, Rhoads fails to disclose setting an end timing of the watermark based on the determined timing (as set forth in some variation in claims 1 and 9). Rhoads also fails to disclose or suggest setting a start timing of the watermark at the determined timing (as set forth in some variation in claims 3 and 11) and setting a second change timing of the watermarks in adjacent content at the determined timing (as set forth in some variation in claims 5 and 13). Similarly, Rhoads does not disclose or suggest setting an end timing of said embedded digital watermark in said contents before an end of said contents (as set forth in claim 17), setting a start timing of watermark before the start timing of the next contents (as set forth in claim 19), and setting a change time of the digital watermark in adjacent content before this adjacent content *i.e.*, in the previous content. In short, Rhoads is silent with respect to setting a timing for the watermarks as it only relates to creating a payload in which the watermark along with other information is recorded.

For at least these exemplary reasons, claims 1, 3, 5, 9, 11, 13, 17, 19, and 21 patentably distinguish from Rhoads. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claims 1, 3, 5, 9, 11, 13, 17, 19, and 21 and their dependent claims 2, 4, 6-8, 10, 12, 14-16, 18, and 20.

VI. New Claims

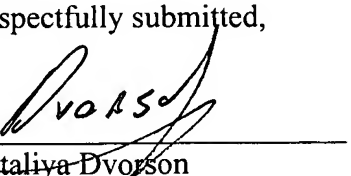
In order to provide more varied protection, Applicant adds claims 25-27. Claims 25-27 are patentable at least by virtue of their dependency on claims 1, 9, and 17, respectively. In addition, claims 25-27 recite in some variation that the watermark is generated according to a pseudorandom noise series, where the pseudorandom noise series codes is added to each brightness value of picture elements of said contents. The prior art of record fails to disclose or suggest the watermark as set forth in these dependent claims.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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